ABSTRACT (EN)

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Title:

Transport and biotransformation of selected anthelmintics in lancet fluke

Dicrocoeliosis is parasitic infection of small ruminants and mouflon is one of them. Lancet fluke (*Dicrocoelium dendriticum*) causes this disease. Energetic metabolism is inhibited by therapeutically significant group of pharmaceuticals – benzimidazoles. The aim of this project is to evaluate the transportation of albendazole (ABZ) – representative of benzimidazoles - and its metabolite albendazole sulfoxide (ABZSO) into the bodies of lancet flukes in *ex vivo* experiment and if lancet fluke biotransform these anthelmintics (ABZ to ABZSO and $ABZSO_2$ (albendazole sulfone)). Lancet fluke (10 parasites) were incubated in medium with anthelmintics for 24 hours. We observed changes of anthelmintics concentration in medium and in parasite´s bodies. After the incubation was finished, flukes and medium were separated. Concentration of ABZ and its metabolites was measured on HPLC. Results indicate that albendazole and albendazole sulfoxide are transported to the bodies of flukes. With growing concentration of anthelmintics in medium the concentration is growing in fluke´s bodies. It was confirmed, that biotransformation of ABZ to ABZSO occurs in flukes. Biotransformation of ABZSO to $ABZSO_2$ was not confirmed in flukes.